

2

Docket No. TPI-T400C2Z1  
Serial No. 10/694,640In the Claims:

1. (Original) An apparatus for measuring transfer of components across a tissue, comprising: a support plate; an array of samples supported by the support plate; a tissue specimen overlaying the array of samples; and a reservoir plate secured to a side of the tissue specimen opposite the array of samples, the reservoir plate having an array of reservoirs.
2. (Original) The apparatus of claim 1, wherein each sample of the array of samples comprises a component-in-common and at least one additional component, wherein each sample differs from at least one other sample with respect to at least one of: (i) the identity of the additional components, (ii) the ratio of the component-in-common to the additional component, or (iii) the physical state of the component-in-common.
3. (Original) The apparatus of claim 2, wherein the component-in-common is a pharmaceutical, a dietary supplement, a nutraceutical, or an alternative medicine.
4. (Original) The apparatus of claim 2, wherein the additional component is an adhesive, an enhancer, an additive, a solvent, an excipient, or a combination thereof.
5. (Original) The apparatus of claim 4, wherein the enhancer is a chemical enhancer, a lipid permeation enhancer, a solubility enhancer, or a combination of enhancers.
6. (Original) The apparatus of claim 4, wherein the adhesive is a polyisobutylene, a silicone, or an acrylic adhesive.
7. (Original) The apparatus of claim 1, wherein each sample in the array of samples is a solid source sample or a liquid source sample.
8. (Original) The apparatus of claim 1, wherein the tissue specimen comprises skin tissue.

J:\TPI\T400C2Z1\PTO\Election.doc\TNNB\sl

3

Docket No. TPI-T400C2Z1  
Serial No. 10/694,640

9. (Original) The apparatus of claim 8, wherein the skin tissue comprises epidermis or stratum corneum.

10. (Original) The apparatus of claims 8 or 9, wherein the skin tissue is human skin tissue, animal skin tissue or engineered skin tissue.

11. (Original) The apparatus of claim 1, wherein the tissue specimen is divided into a plurality of segments, wherein each segment covers a sample and is sealed between the support plate and an annular portion of the reservoir plate defining a reservoir for each sample.

12. (Original) The apparatus of claim 11, wherein the tissue specimen is divided into a plurality of segments by mechanical cutting, scribing, laser cutting, scoring or crimping.

13. (Original) The apparatus of claim 1, wherein each reservoir comprises a passage extending through the reservoir plate and is aligned over a sample.

14. (Original) The apparatus of claim 13, further comprising a reservoir medium within at least one of the reservoirs.

15. (Original) The apparatus of claim 14, wherein the reservoir medium is a fluid or a solution.

16-43. (Canceled)

44. (Original) An apparatus for measuring transfer of components across a tissue, comprising: a base plate; a spacer plate; an array of solid source samples supported by the spacer plate; a tissue specimen overlaying the array of samples; a reservoir plate secured to a side of the tissue specimen

J:\TPI\T400C2Z1\PTO\Election.doc\11\N1/s1

4

Docket No. TPI-T400C27.1  
Serial No. 10/694,640

opposite the array of samples, the reservoir plate having an array of reservoirs; and a clamping means for creating a seal between the reservoir plate and the tissue specimen.

45. (Original) The apparatus of claim 44, further comprising a top plate.

46. (Original) The apparatus of claim 44, wherein one or both of the spacer plate and the reservoir plate are clear or see-through.

47. (Original) The apparatus of claims 44 or 46, wherein the base plate is aluminum.

48. (Original) The apparatus of any one of claims 44, 45, or 46, wherein the clamping means comprises screws passing through the apparatus and secured to the base plate.

49. (Original) The apparatus of claim 47, wherein the clamping means comprises screws passing through the apparatus and secured to the base plate.